I/WE CLAIM:

1. A refrigerator comprising:

a cabinet shell including a fresh food compartment and a freezer compartment;

a passage for fluidly interconnecting the fresh food compartment with the freezer compartment such that a flow of cooling air can flow from the freezer compartment to the fresh food compartment;

a damper provided in the passage, said damper being selectively movable between at least an open position and a closed position in order to control the flow of cooling air;

a cooling system for developing the flow of cooling air directed from the freezer compartment into the fresh food compartment when the damper is in the open position;

a fresh food stirring fan assembly mounted in the fresh food compartment for developing a recirculating airflow within the fresh food compartment, said fresh food stirring fan assembly including: a housing; a stirring fan positioned in the housing; a removable fan cover attached to the housing and disposed about the stirring fan; and a filter pad arranged between the fan cover and the stirring fan, said stirring fan assembly including a central portion through which a recirculating airflow is drawn, and a peripheral portion for redirecting the recirculating airflow back into the fresh food compartment, wherein operation of the stirring fan causes the recirculating airflow to pass through the filter in order to remove odors and other contaminants carried by the recirculating airflow; and

a control unit for operating the stirring fan whenever the cooling system is de-activated and the damper is in the closed position to create a substantially uniform temperature within the fresh food compartment.

2. A refrigerator comprising:

a cabinet shell including at least a fresh food compartment;

a fresh food stirring fan assembly mounted in the fresh food compartment for developing a recirculating airflow within the fresh food compartment, said fresh food stirring fan assembly including: a housing; a stirring fan positioned in the housing; a fan cover attached to the housing and disposed about the stirring fan; and a filter pad arranged between the fan cover and the stirring fan, said stirring fan assembly including a central portion through which a recirculating airflow is drawn, and a peripheral portion for redirecting the recirculating airflow back into the fresh food compartment, wherein operation of the stirring fan causes the recirculating airflow to pass through the filter in order to remove odors and other contaminants carried by the recirculating airflow; and

a control unit for operating the stirring fan to create a substantially uniform temperature within the fresh food compartment.

3. The refrigerator according to claim 2, wherein the housing includes a housing base member interconnected to a main housing through associated tab and receiving clip elements.

4. The refrigerator according to claim 2, further comprising at least one mounting element projecting from the housing, said pin element being adapted to secure the housing within the fresh food compartment.

5. The refrigerator according to claim 3, wherein the peripheral portion is defined by a shroud projecting from a lower region of the housing, said shroud being adapted to direct the recirculating airflow downwardly and outwardly into the fresh food compartment.

6. The refrigerator according to claim 2, wherein the fan cover is removable from the housing to directly expose the filter pad for replacement or cleaning purposes.

7. The refrigerator according to claim 6, wherein the filter is located entirely within cover.

8. The refrigerator according to claim 2, wherein the stirring fan includes a base plate, an annular side wall extending from the base plate and defining a central through hole, and a plurality of vanes positioned and rotatable within the central through hole of the annular side wall.

9. The refrigerator according to claim 8, wherein the housing includes a side wall portion and an ledge portion having a central opening, said stirring fan being arranged within the side wall portion and against the ledge portion of the housing.

10. The refrigerator according to claim 9, wherein the sidewall portion constitutes a cover receiving section which frictionally retains the cover.

11. The refrigerator according to claim 10, wherein the cover receiving section of the housing is formed with a plurality of spaced openings, said cover being removably connected to the housing at the spaced openings.

12. The refrigerator according to claim 11, wherein the cover is formed with a plurality of spaced tabs which are received in the spaced openings to removably attach the cover to the housing.

13. The refrigerator according to claim 10, wherein the cover is snap-connected to the housing.

14. The refrigerator according to claim 2, wherein the housing is provided with a plurality of support elements, said fresh food compartment being defined by a liner including a rear wall, said housing being mounted to the rear wall through the plurality of support elements.

15. The refrigerator according to claim 14, wherein each of the plurality of support elements is formed with a slot, said housing being mounted in the fresh food compartment, with a rear wall of the fresh food compartment extending into the slots.

16. The refrigerator according to claim 15, wherein each of the plurality of support elements is formed with a notched portion provided to establish a permissible degree of insertion of a respective one of the support elements into the rear wall.

17. A refrigerator comprising:

a cabinet shell including at least a fresh food compartment;

a cooling system for developing the flow of cooling air directed into the fresh food compartment;

a fresh food stirring fan assembly mounted in the fresh food compartment for developing a recirculating airflow within the fresh food compartment, said fresh food stirring fan assembly including: a housing; a stirring fan positioned in the housing; and a fan cover disposed about the stirring fan, said stirring fan assembly including a central portion through which a recirculating airflow is drawn, and a peripheral portion for redirecting the recirculating airflow back into the fresh food compartment; and

a control unit for operating the stirring fan whenever the cooling system is de-activated in order to create a substantially uniform temperature within the fresh food compartment.

18. The refrigerator according to claim 17, further comprising: a plurality of sensors for signaling operational parameters of the refrigerator to the control unit, said control unit being adapted to further operate the stirring fan in one of a plurality of operational modes based upon signals received from the plurality of sensors.

19. The refrigerator according to claim 18, wherein the one of the plurality of operational modes is selected from the group consisting of: fan speed, percent run time, and start delay time.

20. The refrigerator according to claim 18, wherein the plurality of sensors includes an ambient temperature sensor.

21. The refrigerator according to claim 18, wherein the plurality of sensors includes a door opening sensor and a fresh food compartment temperature sensor.

22. The refrigerator according to claim 17, further comprising: a filter pad arranged between the fan cover and the stirring fan, wherein operation of the stirring fan causes the recirculating airflow to pass through the filter in order to remove odors and other contaminants carried by the recirculating airflow.

23. The refrigerator according to claim 22, wherein the fan cover is removable from the housing to directly expose the filter pad for replacement or cleaning purposes.

24. The refrigerator according to claim 17, further comprising:

a freezer compartment fluidly connected to the fresh food compartment by a passage; and

a damper mounted within the passage, said damper being selectively movable between at least an open position, wherein cooling air flows from the freezer compartment to the fresh food compartment, and a closed position, wherein the cooling air flow is restricted.

25. The refrigerator according to claim 24, wherein the control unit de-activates the stirring fan when the damper is in the open position.

26. A method of establishing and maintaining a desired temperature within a fresh food refrigerator compartment comprising:

operating a refrigeration system to develop a desired level of cooling in the fresh food compartment;

de-activating the refrigeration system and activating a stirring fan assembly mounted in the fresh food compartment to initiate a flow of recirculating air in the fresh food compartment;

directing the flow of recirculating air through a filter pad of the stirring fan assembly to remove odors and other contaminants from the flow of recirculating air; and

re-directing the flow of recirculating air, through a peripheral portion of the stirring fan assembly, into the fresh food compartment in a plurality of directions to minimize temperature stratification within the fresh food compartment.